REMARKS/ARGUMENTS

These remarks are made in response to the final Office Action of January 11, 2008 (Office Action). As this response is timely filed within the 3-month shortened statutory period, no fee is believed due. However, the Examiner is expressly authorized to charge any deficiencies to Deposit Account No. 50-0951.

Each of the claims were rejected in the Office Action based on newly-cited references. Claim 10 was rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Published Patent Application 2002/0032564 to Ehsani, *et al.* (hereinafter Ehsani). Claims 1-9 and 11-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ehsani in view of U.S. Patent 5,704,060 to Del Monte (hereinafter Del Monte).

Although Applicants respectfully disagree with the rejections, Applicants nevertheless have amended certain claims and cancelled certain other claims so as to expedite prosecution of the present application. Applicants respectfully note, however, that neither the amendments nor cancellation of claims are intended as, and should not be interpreted as, the surrender of any subject matter. Accordingly, Applicants respectfully reserve the right to present the original version of any of the amended or cancelled claims in any future divisional or continuation applications from the present application.

In particular, Applicants have amended independent Claims 1, 10, 11, and 19 to further emphasize certain aspects of the invention. Applicants also have amended dependent Claim 12 so as to maintain consistency among the claims. Applicants have cancelled dependent Claims 5 and 15. The claim amendments, as discussed herein, are fully supported throughout the Specification. No new matter has been introduced by virtue of any of the claim amendments.

Claim Amendments

It may be useful at this juncture to highlight certain aspects of the claims, as amended. Claim 1, for example, is directed to a method for creating a speech recognition

callflow for an application. The method can include placing a symbolic representation of a prompt into a workspace of a graphical user interface for creating the speech recognition callflow for the application, the prompt defining a query requesting a value for a variable, wherein the placing generates within the application an instruction to present the query to a user.

The method further can include attaching to the prompt representation a pre-built grammar selected by a user and/or a user-entered individual new option. More particularly, the new option can be entered by the user, using the graphical user interface, *during user-directed creation* of the speech recognition callflow. (See, e.g., Specification, paragraph [0016] and paragraph [0019], especially lines 6-10 describing exemplary techniques use by a designer during the process of creating the speech recognition callflow.)

According to the method, the attaching can generate within the application an instruction to process a speech input responsive to the presented query using at least one among the pre-built grammar and the new option. The pre-built grammar can include phrases associated with valid values for the variable. The new option can comprise a user-defined phrase associated with a valid value for the variable.

Further according to the method, if the new option does not match any element of the pre-built grammar or an annotation associated with an element of the pre-built grammar, then a *new* grammar can be automatically generated. (See, e.g., Specification, paragraph [0016], especially lines 6-10.) Moreover, the new grammar so generated can be *independent* of the pre-built grammar and the new option can be contained in the new grammar generated so as to contain the new option. (See, e.g., Specification, paragraph [0017], especially lines 10-11.) These steps, also according to the method, can be repeated with respect to each other request that is to be included in the callflow, the steps being repeated until the speech recognition callflow has been completed.

The Claims Define Over The Cited References

As already noted, independent Claim 10 was deemed to be anticipated by Ehsani, whereas independent Claims 1, 11, and 19 were deemed to be unpatentable over Ehsani in view of Del Monte. Applicants respectfully submit, however, that neither Ehsani nor Del Monte, alone or in combination, teach or suggest every feature recited in the amended claims.

Claim 10

New Option Provided During User-Directed Creation Of A Speech Recognition Callflow

With respect to Claim 10, Ehsani does not teach or suggest assigning an individual option wherein the option is supplied by a user during a user-directed creation of a speech recognition callflow, as recited in the amended claim. In a portion related to one cited in the Office Action, Ehsani describes "optimizing [a] phrase-based n-gram parse." (Ehasani, paragraph [0160]; see also paragraph [0162].) This optimizing, however, is not a user-directed process for creating a speech recognition callflow. Rather, the described process is directed to creating a "phrase-based parse of a given text corpus" that begins with the building of a phrase-based "language model." (Ehsani, paragraph [0156].)

Ehsani's process further involves either using a "greedy algorithm" to select an "optimal parse" or, alternatively, providing a parsing mechanism for selecting a parse that "minimizes the number of parses for each parse." (Ehsani, paragraphs [0157] and [0158].) Ehsani's process proceeds with the division of the text corpus into sub-corpora. (Ehsani, paragraph [0161].) Once the language model is built, it is the model that is applied so to "iteratively" refine "corpus segmentation." (Ehsani, paragraph [0156].) The entire process described by Ehsani is algorithmic-based and, while proceeding iteratively, is not interactive. That is once the corpus is provided, the process proceeds to completion

without a user supplying, *during the process*, a *new* option. It follows that Ehasani does not teach or suggest assigning an individual option supplied by a user during user-directed creation of the speech recognition callflow, as explicitly recited in amended Claim 10.

automatically generating a new grammar,

independent *of pre-build grammar, to hold new entry*

Ehsani is cited as disclosing the configuring of an option as a new entry in a new, automatically-constructed grammar if the option does not match a phrase or its annotation. The process referred to is what Ehsani describes as a process of optimizing a phrase-based n-gram parse, as already discussed. In this process of Ehsani, there is no determination as to whether a user-supplied option is a match with an *existing*, *pre-built* grammar element or an annotation corresponding to such an element. Instead, Ehsani assesses probabilities of parses in which "unseen phrases" recur. (Ehsani, paragraph [0162], lines 8-11.) Accordingly, there is no direct matching determination. Ehsani provides only a probability assessment.

More fundamentally, Ehsani fails to provide for the generation of a *new* grammar, let alone one that is independent of an *existing, pre-built* grammar. Instead, depending on the probability assessment, Ehsani merely *adds* a new "collocation" to an existing dictionary (i.e., one that existed at the outset of the process for creating a phrase-based parse). (Ehsani, paragraph [0162], lines 11-13.)

The process is explicitly described in Ehsani as follows:

> "[0162] A significant advantage of using a language modeling technique to iteratively refine corpus segmentation is that this technique allows us to identify new phrases and collocations and thereby enlarge our initial phrase dictionary. A language model based corpus segmentation assigns probabilities not only to phrases contained in the dictionary, but to unseen phrases as well (phrases not included in the dictionary). Recurring unseen

> phrases encountered in the parses with the highest unigram probability score are likely to be significant fixed phrases rather than just random word sequences. By keeping track of unseen phrases and selecting recurring phrases with the highest unigram probabilities, we identify new collocations that can be *added* to the dictionary." (Ehsani, paragraph [0162].) (Emphasis supplied.)

Ehsani's process ranks rather than matches according to a "highest unigram probability score" so as to create a "phrased-based parse" of a text corpus. Ehsani's ranking is not equivalent or similar to determining whether a new option, provided by a user during the creation of a callflow, matches a pre-built grammar or a corresponding annotation, as recited in amended Claim 10.

Moreover, as the above-quoted language reveals, Ehsani does not automatically generate a *new* grammar to hold the user-supplied new option if the individual option fails to match a recognition phrase or annotation in a pre-built grammar. Instead, as explicitly described, Ehsani expands an existing (i.e., pre-built) dictionary by *adding* new collocations having a particular probability score. It further follows, therefore, that Ehsani does not generate a new grammar that is independent of the pre-built grammar and automatically constructed to hold the new entry. With Ehsani, as explicitly described in the reference, collocations are added to an existing, pre-built dictionary. That is, Ehsani adds to an existing dictionary; Ehsani does not generate a new one. Ehsani thus does not construct a *new* grammar. Moreover, Ehsani's expanded dictionary is not independent of the existing dictionary; it is the same dictionary.

Accordingly, Ehsani fails to teach, expressly or inherently, every feature recited in independent Claim 10. Applicants, therefore, respectfully submit that Claim 10 defines over the prior art.

Claims 1-9, and 11-20

Independent Claims 1, 11, and 19 were each rejected as being unpatentable over Ehsani in view of Del Monte. Del Monte is directed to a method and system for storing and retrieving text. As described in the reference, Del Monte's method and system store most words of the text solely in an inverted structure, and the remainder of the text's information in an auxiliary structure. (See, e.g., Del Monte, Abstract.)

Del Monte is cited as teaching a dictionary matching function that compares words stored in a word vector table. As pointed out at page 5 of the Office Action, however, Del Monte teaches that "data is *added* to a list if not already present." (Office Action, page 5.) (Emphasis supplied.)

Thus, like Ehsani, Del Monte fails to teach or suggest that a *new* grammar is constructed if a new option entered by a user during the creation of a callflow does not match an element of a pre-built grammar or corresponding annotation, as recited in amended Claims 1, 11, and 19. Like Ehsani, which merely adds collocations so as to *expand* an existing dictionary rather than generate a new one, Del Monte merely *adds* new words to an *existing* list. Moreover, Del Monte does not generate an independent list from an existing one. With Del Monte, as with Ehsani's dictionary, the list to which words are added is the already-existing list, not a new one created to contain the new word and independent of the existing list.

Accordingly, even when Ehsani is combined with Del Monte, the combination yet fails to teach or suggest a method or system that automatically generates a new grammar independent of a pre-built grammar to contain a user-supplied new option if the new option does not match any element of the pre-built grammar or an associated annotation associated with an element of the pre-built grammar, as recited in amended Claims 1, 11, and 19.

It follows that neither Ehsani nor Del Monte, alone or in combination, teach or suggest every feature recited in Claims 1, 11, and 19, as amended. Applicants

respectfully submit, therefore, that the claims define over the prior art. Applicants further respectfully submit that whereas each of the remaining claims depends from Claim 1, 11, or 19 while reciting additional features, these dependent claims likewise define over the prior art.

CONCLUSION

Applicants believe that this application is now in full condition for allowance, which action is respectfully requested. Applicants request that the Examiner call the undersigned if clarification is needed on any matter within this Amendment, or if the Examiner believes a telephone interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,

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